

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) An ~~entrapped~~ entrapment detection device of an opening-closing member which ~~is opening and closing~~ opens and closes an opening portion of a vehicle body comprising:

a driving power source for ~~moves~~ moving the opening-closing member;

a motivity transmission member provided between the opening-closing member and the driving power source;

the motivity transmission member comprising a cable wound in accordance with actuation of the driving power source and connected to the vehicle body by a bracket;

the bracket including a deformation member configured to be deformed via the motivity transmission member in accordance with the load applied to the opening-closing member at during an opening-closing operation of the opening-closing member;

a strain gauge assembled to the deformation member and configured to convert a strain according to the deformation of the deformation member to an electric signal; and

a control mechanism for detecting an entrapment of an external object based on the electric signal from the strain gauge.

2. (Currently Amended) The ~~entrapped~~ entrapment detection device according to claim 2 1, wherein the ~~motivity transmission member includes a cable which is wound in accordance with the actuation of the driving power source and is connected to the vehicle body by a bracket, and wherein the bracket includes the deformation member and a stopper portion for stopping the cable.~~

3. (Currently Amended) The ~~entrapped~~ entrapment detection device according to claim 3 2, wherein the deformation member of the bracket ~~forming~~ comprises a plane surface portion of the bracket that is configured to be approximately perpendicular to an axial line of the cable, and the strain ~~strain~~ gauge is ~~being~~ mounted on the plane surface portion.

4. (Currently Amended) The ~~entrapped~~ entrapment detection device according to claim 2 3, wherein the bracket further includes an assembling portion formed at a portion away from an a central axis ~~center~~ of the cable for assembling the bracket relative to the vehicle body and the plane surface portion is formed between the assembling portion and the stopper portion.

5. (Currently Amended) The ~~entrapped~~ entrapment detection device according to Claim 1, wherein the control mechanism judges the entrapment of the external object when a measurement value in accordance with the electric signal from the strain gauge is equal to or greater than a threshold value.

6. (Currently Amended) The ~~entrapped~~ entrapment detection device according to Claim 1, wherein the control mechanism judges the entrapment of the external object when a variation amount of a measurement value in accordance with the electric signal from the strain gauge per a predetermined time is equal to or greater than a predetermined amount.

7. (Currently Amended) The entrapment detection device ~~for the entrapment of the opening-closing member~~ according to Claim 1, wherein the control mechanism judges the entrapment of the external object when a difference between a measurement value in accordance with the electric signal from the strain gauge and a reference value, which is determined based on the measurement value when the duration of the measurement value is exceeded during a predetermined period, is equal to or greater than a predetermined value.

8. (New) An entrapment detection device of an opening-closing member which opens and closes an opening portion of a vehicle body comprising:

a driving power source for moving the opening-closing member;

a cable extending between the opening-closing member and the driving power source, with output of the driving power source moving the opening-closing member by way of the cable;

the cable being connected to a bracket which is adapted to be mounted on the vehicle body;

a strain gauge mounted on a portion of the bracket to produce a signal upon deformation of the portion of the bracket; and

a control mechanism which detects entrapment of an object based on the signal produced by the strain gauge.

9. (New) The entrapment detection device according to claim 8, wherein the cable is connected to a tensioner, and the bracket includes a stopper portion adapted to be contacted by the tensioner.

10. (New) The entrapment detection device according to claim 9, wherein the portion of the bracket on which the strain gauge is mounted is a plane surface portion that is approximately perpendicular to an axial line of the cable.

11. (New) The entrapment detection device according to claim 10, wherein the bracket further includes an assembling portion provided with a bore for assembling the bracket to the vehicle body, the plane surface portion being positioned between the assembling portion and the stopper portion.

12. (New) The entrapment detection device according to Claim 8, wherein the control mechanism detects entrapment of the object when a measurement value of the signal from the strain gauge is equal to or greater than a threshold value.

13. (New) The entrapment detection device according to claim 8, wherein the portion of the bracket on which the strain gauge is mounted is a plane surface portion that is approximately perpendicular to an axial line of the cable.

14. (New) The entrapment detection device according to claim 8, wherein the bracket further includes an assembling portion provided with a bore for assembling the bracket to the vehicle body.

15. (New) The entrapment detection device according to Claim 8, wherein the control mechanism detects entrapment of the object when a variation amount of a measurement value of the signal from the strain gauge per a predetermined time is equal to or greater than a predetermined amount.

16. (New) The entrapment detection device according to Claim 8, wherein the control mechanism determines a reference value as a measurement value of the signal from the strain gauge when the signal is maintained at an approximately constant value for a predetermined period of time, the control mechanism detecting entrapment of the object when a difference between the measurement value of the electric signal from the strain gauge and the reference value is equal to or greater than a predetermined value.